

## ***EXECUTIVE SUMMARY***

---

### **S.1 Project Description**

The study area for this project is 43 miles in length and runs along Interstate 15 (I-15) from the South Payson interchange in Utah County to the 12300 South interchange in Salt Lake County.

This Environmental Impact Statement (EIS) and Section 4(f) Evaluation assesses the need for making transportation improvements within the I-15 Corridor, evaluates alternatives, and presents the environmental consequences of proposed improvements. The following briefly summarizes the project.

### **S.2 Need for the Project**

Several transportation-related needs were identified along the I-15 corridor in Utah and Salt Lake counties.

There is a need to avoid the unacceptable level of congestion which is projected to occur due to increased travel demand in the I-15 corridor. Based on projected growth in population and vehicle miles traveled, it is expected that by 2030 the level of service (LOS) for 15 of 21 mainline I-15 segments will be LOS E or LOS F, meaning that these segments will perform worse than the goal of LOS D or better. In general, a LOS lower than D is considered unacceptable (as shown in Figure S-1). Additionally, peak hour congestion will also exceed acceptable levels at one or more of the interchange components (i.e., ramps, intersections<sup>1</sup> or surface streets) at 18 of the 22 interchanges on I-15 along the study corridor. Within the 22 interchanges, 40 of 61 components will have an unacceptable level of service. These 2030 projections assume that all other highway and transit projects in applicable regional transportation plans, including commuter rail and the Mountain View Corridor project, have been implemented. This need for transportation improvements in the I-15 corridor is recognized by regional and local transportation and land-use plans. These include the regional transportation plans maintained by the Wasatch Front Regional Council (WFRC) and Mountainland Association of Governments (MAG), which under federal law are responsible for transportation planning in the project area.

There is also a need to address substandard I-15 roadway features, which contribute to both congestion and safety concerns. Analysis of the existing I-15 roadway indicates that there are 15 vertical curves and 2 horizontal curves that are substandard due to inadequate stopping sight distance; two ramps which have inadequate acceleration length; and 13 bridges which require replacement or significant repair. Crash analysis of I-15 indicates that for 11 out of the 14 crash analysis segments in the project area, the crash severity rate exceeds the statewide average for similar roadways.

One need for the Project – avoiding unacceptable congestion on I-15 – will be partially served by the commuter rail project that was previously being considered in this NEPA document but now is proceeding independently as a locally funded UTA project. However, as indicated by the above-projected congestion levels on I-15, there is still a substantial need to be addressed by this project.

### **S.3 Purpose of Project**

This project has a primary purpose and several secondary purposes. The primary purpose is to relieve 2030 peak-hour congestion within the I-15 corridor, by improving LOS on mainline I-15, on the existing 22 interchanges, and interchange components which provide access to and from local communities.

The secondary purposes or objectives of this project include:

---

<sup>1</sup> Intersections refer to ramp intersections as well as the first arterial intersection adjacent to the ramp termini, as appropriate.

- Where possible, achieving Level of Service (LOS) D on I-15, interchanges and their components for the year 2030, as a measure of the primary purpose;
- Improving roadway safety by upgrading substandard roadway, bridge, and interchange elements to current American Association of State Highway Transportation Officials (AASHTO) and UDOT design standards;
- Providing consistency with regional transportation plans prepared by MAG and WFRC;
- Improving the regional and intra-county movement of people and goods;
- Providing a transportation system that is reasonably consistent with locally adopted land use and transportation plans and with the stated objectives of local governments and communities.

As described in Chapter 2, the primary purpose and need (relieving projected 2030 peak-hour congestion on I-15) was used to screen out alternatives, while the secondary purposes and objectives were used to refine and compare alternatives but were not used to screen alternatives from further consideration.

Additional purposes that were considered during the initial screening process, before commuter rail was locally funded and approved as the primary transit element in the I-15 corridor, included providing cost-effective transit services (taking into account capital, operating, and maintenance costs and the incremental annual costs per rider) and substantially increasing the daily transit trips in Utah County and between Utah County and Salt Lake County. These purposes, which were the primary basis for inclusion of the commuter rail in the build alternative as initially formulated, are being served by the commuter rail project that is now proceeding as a separate local UTA project.

## S.4 Alternatives

### Background

It was initially contemplated that this EIS would serve as a decision document for both the transit component and the highway component of the solution to projected congestion on the I-15 corridor; therefore, the formulation and screening of alternatives included major transit and highway elements. Based on this approach, it was determined that two alternatives – the No Build Alternative, and a build alternative which included commuter rail and I-15 reconstruction – would be carried forward for detailed analysis. Shortly thereafter, Utah voters approved commuter rail as a locally funded UTA project in November 2006 and a decision was made by the FHWA, UDOT and UTA that it was no longer necessary or appropriate for commuter rail to be considered as a proposed action or build alternative in the I-15 Corridor EIS. Instead, UTA studied commuter rail in an environmental disclosure document prepared pursuant to UTA policy, which was completed in October 2007, and construction of commuter rail in Utah and Salt Lake counties is now scheduled to begin in spring of 2008.

The alternatives development and screening process for this project was extensive and included numerous ideas from resource agencies and the public, as well as coordination with the Metropolitan Planning Organizations (MPOs) city staff, UDOT management, Federal Highway Administration (FHWA), and other stakeholders. Over a two-year period, the alternatives development and screening process evaluated a full range of alternatives and advanced two for detailed study. Figure S-2 provides an overview of this process.

The alternatives development for this project began as numerous ideas that were formulated into 11 initial alternatives that were screened to five alternatives, which were then screened to two alternatives for detailed study in this EIS. These two alternatives that were carried forward were Alternative 1 (No Build) and Alternative 4 (Widening and Reconstruction of I-15 plus Commuter Rail Transit). Commuter Rail Transit was then separated from the project and a separate Environmental Study Report was completed in October 2007. Accordingly, Commuter Rail Transit (CRT) was removed as a component of Alternative 4 for purposes of the impact assessment in this EIS.

Alternatives 1 and 4 are described below.

#### **Alternative 1: No Build**

- The definition of Alternative 1: No Build was revised to take into account both the advancement of CRT into UTA's local project development process and decisions made in the Mountain View Corridor EIS planning project regarding the location of the southern connection of the proposed Mountain View Corridor to I-15 in Utah County. As a result, Alternative 1 consists of the following elements:
- All highway and transit projects identified in the MAG Utah Valley 2030 Long Range Transportation Plan (2005 adopted version);
- Commuter rail from Provo to Salt Lake (FrontRunner);
- All highway and transit projects identified in the WFRC 2007-2030 Long Range Transportation Plan (LRP);
- Proposed Mountain View Corridor as a freeway connecting to I-15 at Lehi 2100 North;
- Ongoing routine I-15 bridge and pavement preservation projects.

#### **Alternative 4: I-15 Widening and Reconstruction**

Alternative 4 would provide for major widening and total reconstruction of the existing I-15 facility, including the following:

- Addition of general purpose lanes;
- Extension of express lanes to US-6 in Spanish Fork;
- Reconstruction of existing interchanges. Three options are being considered at American Fork Main Street;
- Construction of a new interchange (North Lehi);
- Four interchange and frontage road options in the Provo/Orem area;
- Reconstruction of bridges that cross over or under I-15; and
- Improvement to cross streets as needed to tie into the existing roadway. Cross street widths are in accordance with the current LRP.

#### ***S.4.1 Joint Lead Agencies' Preferred Alternative***

The Joint Lead Agencies have considered the traffic performance of Alternative 1 and Alternative 4, including all of the options through the Provo and Orem area, and the interchange options at American Fork Main Street. Based on those criteria, and in consideration of the environmental impacts documented in Chapters 3 and 4, the Joint Lead Agencies have identified Alternative 4, with Option C at American Fork Main Street (North SPUI), and Option D in the Provo/Orem area (a fly-over at University Parkway and round-about, with no frontage roads nor 800 South Interchange), as their Preferred Alternative. In summary, this alternative includes the following:

- Total reconstruction of I-15, including addition of general-purpose lanes to I-15;
- Extension of express lanes to US-6 in Spanish Fork;
- Reconstruction of existing interchanges;
- Construction of Option C at the American Fork Main Street Interchange;
- Construction of Option D in the Provo/Orem area;
- Construction of a new interchange at North Lehi;
- Improvements to bridges that cross the roadway;
- Improvements to connecting arterial streets;
- Construction of structures to accommodate new undercrossings at Provo 500 West and Orem 1200 North.

The Preferred Alternative has been selected after careful consideration of traffic performance, environmental impacts (Chapter 3) and all public comments (Appendix D). After comments regarding impacts to wetlands and other

resources, elements of the Preferred Alternative have been refined. Refinements to Provo/Orem Option D include the re-alignment of Provo 820 North slightly south, and a slight shift in the I-15 mainline in the Orem 800 South area. Refinements to Option C in American Fork include alignment shifts, new retaining walls, and an additional lane on Main Street between I-15 and 300 East. Figure S-1 illustrates the Preferred Alternative's level-of-service, relative to year 2005 conditions and Alternative 1 (No Build) conditions.

## S.5 Traffic Summary

Table S-1 presents a summary of the traffic analysis and comparison described for Alternative 1 and Alternative 4.

Table S-1: LOS Summary Comparison

Section		Mainline Sections		Intersection Components	
		Total	LOS E or F	Total	LOS E or F
South Utah County Section					
	Alternative 1	7	6	14	9
	Alternative 4 (Preferred)	7	4	14	2
Central Utah County Section					
Common Area	Alternative 1	4	4	9	6
	Alternative 4 (Preferred)	4	1	9	1
Option Area	Alternative 1	2	2	9	6
	Alt 4 Option A	2	0	9	1
	Alt 4 Option B	2	0	9	1
	Alt 4 Option C	2	0	9	1
	Alt 4 Option D (Preferred)	2	0	9	2
North Utah County Section					
Common Area	Alternative 1	5	4	13	9
	Alternative 4 (Preferred)	5	0	13	0
American Fork Interchange	Alternative 1	N/A	N/A	4	3
	Alt 4 Option A	N/A	N/A	4	1
	Alt 4 Option B	N/A	N/A	3	1
	Alt 4 Option C (Preferred)	N/A	N/A	3	1
North Lehi	Alternative 1	2	2	8	6
	Alt 4 w/o Interchange	2	0	8	2
	Alt 4 w/ Interchange	2	0	9	0
South Salt Lake County Section					
	Alternative 1	2	2	4	0
	Alternative 4 (Preferred)	2	2	4	0

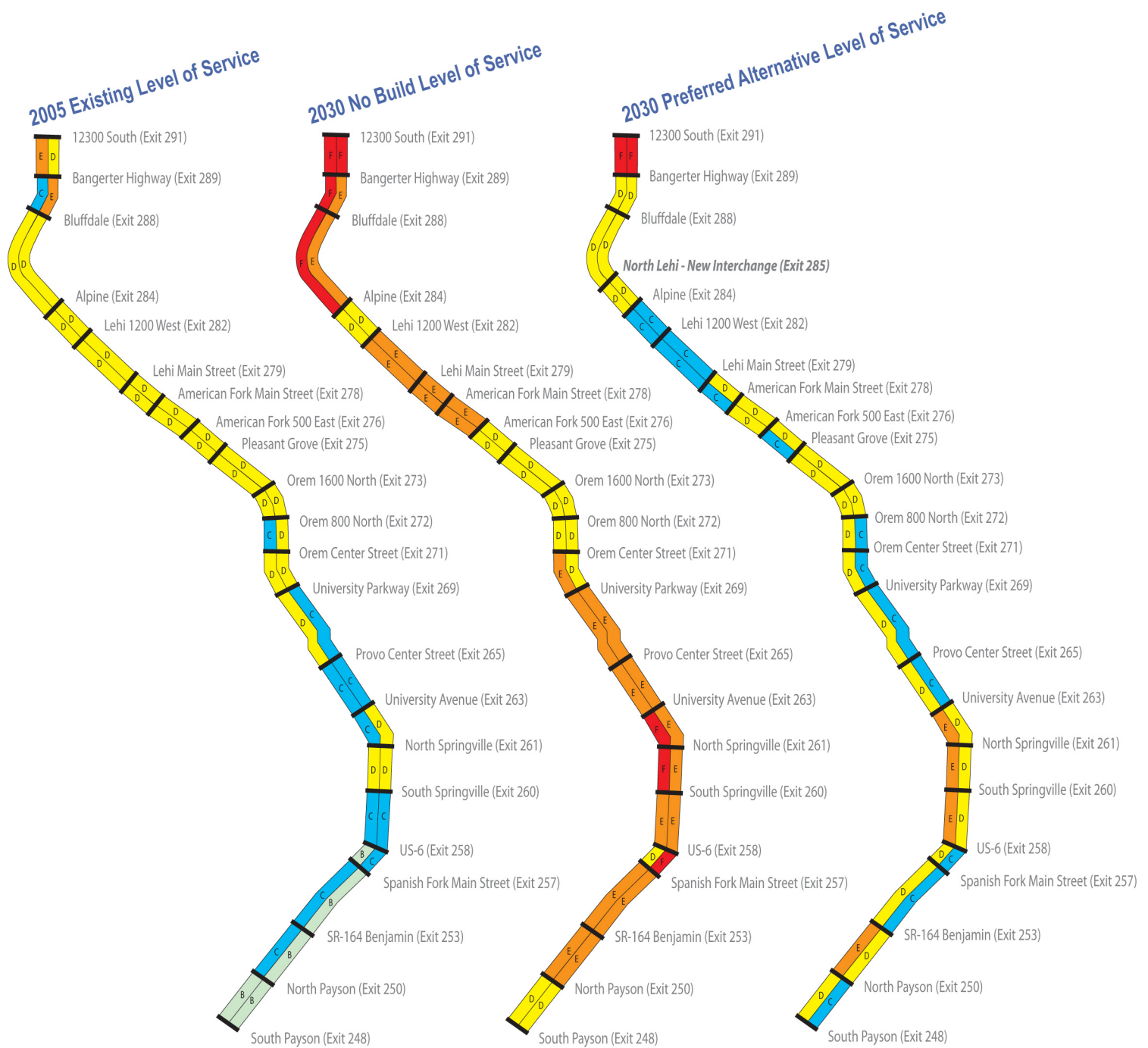


Figure S-1  
Mainline I-15: 2005, 2030 No Build, and 2030 Preferred Alternative Level of Service

## LEGEND

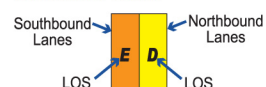


Interchange Names are shown for Southbound and Northbound I-15 (source: UDOT, Nov. 2004)

## Level of Service for Peak Hour (A = Best / F = Worst)

A	C	E
B	D	F

## Directional Guide



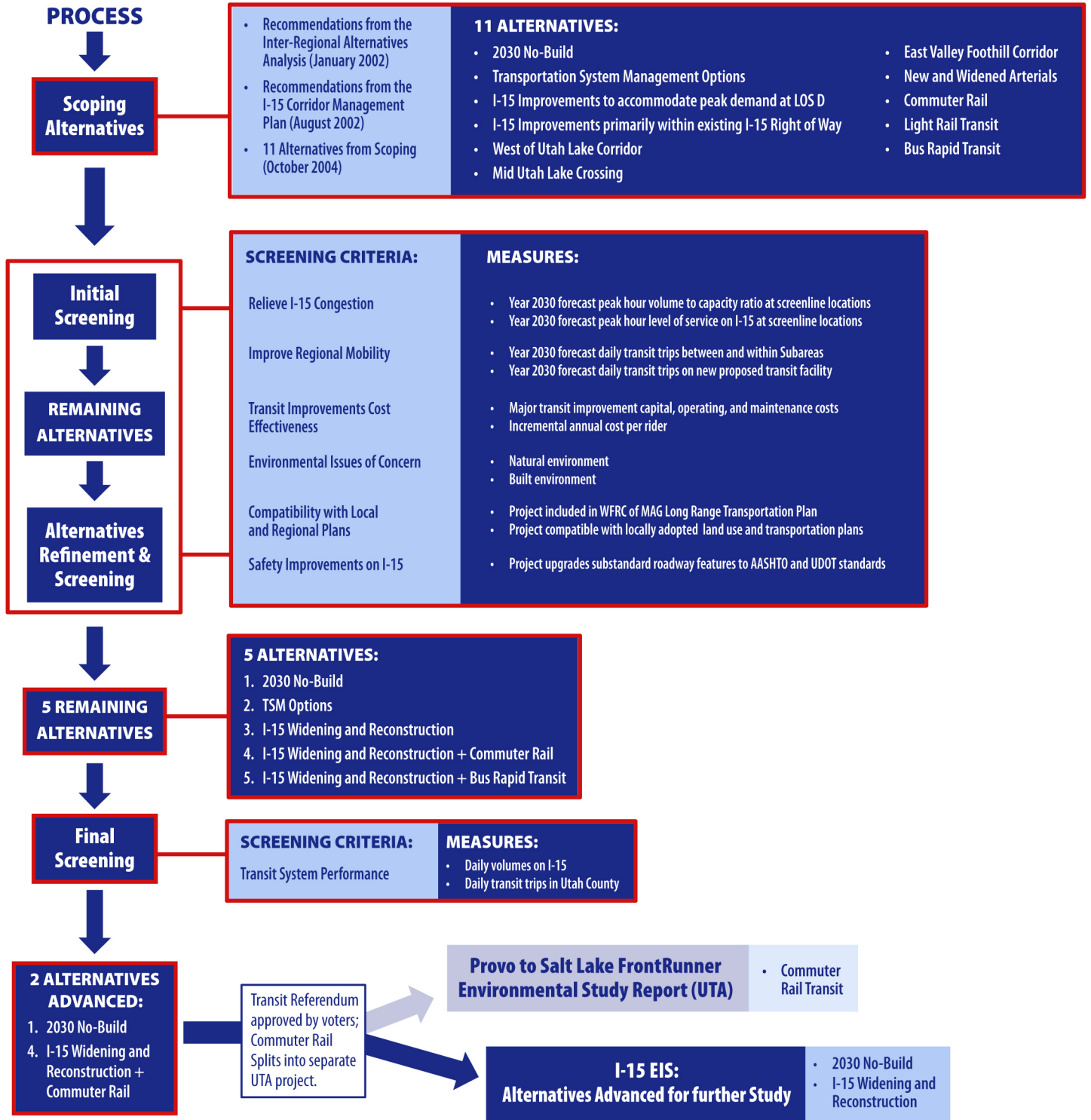


Figure S-2  
Schematic of Alternatives Development and Screening

### S.6 Summary of Impacts

Table S-2 summarizes the impacts of Alternative 4 on resources evaluated in this chapter. It provides a comparison among Options A, B, C, and D in the Provo/Orem area; and among Options A, B, and C in the American Fork Main Street area. The second column in the table labeled “Alternative 4 Totals Common Area Only” provides the resource impact information for those sections of I-15 that are outside the Provo/Orem Option area and the American Fork Main Street Option area. To determine the impact of Alternative 4 for the entire 43-mile long corridor for a given resource, the information for any option in the Provo/Orem Option area and for any American Fork option should be added to the information in the “Alternative 4 Totals” column. The far right column provides the minimum and maximum range of Alternative 4 impacts for the 43-mile long corridor. This table also includes a comparative summary of the uses of Section 4(f) resources after the application of avoidance, minimization, and all possible planning.

Table S-2: Summary of Alternative 4 Impacts by Design Option

Impact Category	Alternative 4 Totals (Common Area Only) (Preferred)	Provo/Orem Option A Only	Provo/Orem Option B Only	Provo/Orem Option C Only	Provo/Orem Option D Only (Preferred)	American Fork Main Street Option A Only	American Fork Main Street Option B Only	American Fork Main Street Option C Only (Preferred)	Range of Alternative 4 Total Impacts (Preferred in parentheses)
Land acquired	354 acres	137 acres	118 acres	89 acres	75 acres	49 acres	61 acres	63 acres	478 to 544 acres (492)
Prime Farmland	0 acres	0.15 acres	0.15 acres	0 acres	0 acres	1.43 acres	29.81 acres	4.92 acres	1.43 to 29.96 acres (4.92)
Farmland of Statewide Importance	0 acres	9.08 acres	9.08 acres	0.45 acres	0.45 acres	9.50 acres	12.66 acres	10.62 acres	9.95 to 21.74 acres (11.07)
Farmland of Unique Importance	3.54 acres	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres	0 acres	3.54 acres (3.54)
Agriculture Protection Areas	0.25 acres	0 acres	0 acres	0 acres	0 acres	0 acres	5.09 acres	0 acres	0.25 to 5.34 acres (0.25)
Relocations									
Housing Units	12	73	19	55	2	1	3	1	15 to 88 (15)
Businesses	20	39	38	8	16	9	9	10	37 to 69 (46)
Noise receptors above Noise Abatement Criteria	428	291	291	291	291	103	124	103	822 to 843 (822)
Wetlands	24.75 acres	27.68 acres	27.89 acres	19.62 acres	16.95 acres	5.28 acres	7.79 acres	5.25 acres	46.95 to 60.43 acres (46.95)
Threatened and Endangered Species and Habitat	“No direct effects” for 16 species. “No effects likely” for 4 species. No differences between design options.								“No direct effects” for 16 species. “No effects likely” for 4 species.
Adverse impacts to historic properties	0	1	1	1	1	2	2	2	3 (3)
Hazardous Waste sites	3 potential contaminant sites within 0.10 mile. Low potential for impacts. No differences between design options.								3 potential contaminant sites within 0.10 mile. Low potential for impacts.
Section 4(f) Use (Chapter 4)  Use  de minimis	0	1	1	1	1	2	2	2	3 (3)
	10	5	3	3	2	2	2	1	13 to 17 (13)

THIS PAGE INTENTIONALLY LEFT BLANK



## S.7 Permits and Clearances

Implementation of Alternative 4 will require the permits shown in Table S-3.

Table S-3: Required Permits and Clearances

Permit/Clearance	Granting Agency(ies)	Applicant
<i>Federal Permits, Reviews and Approvals</i>		
Section 404 Permit (Clean Water Act)	USACE	UDOT
Section 401 of the Clean Water Act Certification	Utah Division of Water Quality	UDOT
Section 402 Permit (UPDES)	Utah Division of Water Quality	Contractor
Approval of Addition or Modification of Access Points	FHWA	UDOT
Section 7 Consultation and Biological Assessment/Incidental Take Statement	USFWS	FHWA/UDOT
Section 106 of the National Historic Preservation Act	Utah SHPO and Advisory Council on Historic Preservation	FHWA/UDOT
Blanket Certification (prior notice)	Federal Energy Regulatory Commission	Gas company
<i>State Permits, Reviews and Clearances</i>		
Stream Alteration Permit	Utah Division of Water Rights	UDOT
Air Quality Approval Order	Utah Division of Air Quality	Contractor
Certificate of Registration	Utah Division of Wildlife Resources	Contractor
Approval of Remediation Work Plan	UDEQ or EPA	UDOT
Construction-related permits for all of the above	Various agencies	Contractor
<i>Local permits and Clearances</i>		
Floodplain Development Permit	Local jurisdictions	UDOT

## S.8 Regulatory Compliance

The planning, agency coordination, public involvement, and impact evaluation of the project has been coordinated according to the National Environmental Policy Act, the Clean Water Act, the Clean Air Act, the Farmland Protection Policy Act, Executive Order 11990 on Wetlands Protection, Executive Order 11988 on Floodplain Protection, Executive Order 12898 on Environmental Justice, the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, Section 4(f) of the Transportation Act of 1966, Section 6(f) of the Land and Water Conservation Fund Act of 1965, and other state and federal laws, policies, and procedures for environmental impact analyses and preparation of environmental documents.

THIS PAGE INTENTIONALLY LEFT BLANK